WHAT IS CLAIMED IS:

1 A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed adjacent to or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member disposed so as to face towards the predetermined surface;

a first coil which is helically wound and is disposed such that magnetic flux interlinks in a position on the vibrating member which corresponds to the first magnetic pole face; and

a second coil which is helically wound and is disposed such that magnetic flux interlinks in a position on the vibrating member which corresponds to the second magnetic pole face.

2 The flat acoustic conversion device according to claim 1, wherein current flows in the same direction in a portion of the first coil which is adjacent to the second coil and in a portion of the second coil which is adjacent to the first coil.

3 The flat acoustic conversion device according to claim 1, wherein when

the coil winding directions from the outer periphery to the inner periphery of the first and second coils are the same, either the inner peripheries of the first and second coils are connected to each other, or the outer peripheries of the first and second coils are connected to each other.

4 The flat acoustic conversion device according to claim 1, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are different from each other, either the inner periphery of one of the first or second coil is connected to the outer periphery of the other of the first or second coil, or the inner peripheries of both the first and second coils are connected to each other and the outer peripheries of both the first and second coils are connected to each other.

(5) A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed adjacent to or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member disposed so as to face towards the predetermined surface;

a first coil which is helically wound and is disposed such that magnetic flux interlinks in a position on the vibrating member which

corresponds to the first magnetic pole face;

a second coil which is formed in a helical shape wound in the opposite direction to the first coil and is disposed such that magnetic flux interlinks in a position on the vibrating member which corresponds to the first magnetic pole face, and which is provided at a position on the vibrating member overlapping with the first coil, and whose inner peripheral end is connected to an inner peripheral end of the first coil;

a third coil which is formed in a helical shape wound in the same direction as the second coil, and which is disposed such that magnetic flux interlinks in a position on the vibrating member which corresponds to the second magnetic pole face, and whose outer peripheral end is connected to an outer peripheral end of the second coil; and

a fourth coil which is formed in a helical shape wound in the same direction as the first coil, and which is disposed such that magnetic flux interlinks in a position on the vibrating member which corresponds to the second magnetic pole face, and which is provided at a position on the vibrating member overlapping with the third coil, and whose inner peripheral end is connected to an inner peripheral end of the third coil.

6 The flat acoustic conversion device according to claim 5, wherein the first coil is provided on one surface of the vibrating member and the second coil is provided on the other surface of the vibrating member and the inner peripheral end of the second coil passes through the vibrating member and connects with the inner peripheral end of the first coil, and the third coil is provided on the other surface of the vibrating member and the fourth coil is

provided on the one surface of the vibrating member and the inner peripheral end of the fourth coil passes through the vibrating member and connects with the inner peripheral end of the third coil.

7 A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed adjacent to or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member provided with a coil placement portion and having a coil which interlinks with magnetic flux from the first and second magnets disposed on the coil placement portion;

a housing member for housing the coil and the vibrating member together; and

a pliable supporting member for enveloping the coil placement portion of the vibrating member together with the coil and thereby supporting the coil placement portion of the vibrating member together with the coil such that the coil placement portion of the vibrating member is capable of vibrating together with the coil without the coil placement portion of the vibrating member and the coil coming into contact with the inner surface of the housing member.

8 The flat acoustic conversion device according to claim 1, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

9 The flat acoustic conversion device according to claim 5, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

10 The flat acoustic conversion device according to claim 7, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

11 The flat acoustic conversion device according to claim 1, wherein at least one of the first magnet and the second magnet has a plurality of types of shape.

12 The flat acoustic conversion device according to claim 5, wherein at least one of the first magnet and the second magnet has a plurality of types of shape.

13 The flat acoustic conversion device according to claim 7, wherein at least one of the first magnet and the second magnet has a plurality of types of shape.

14 The flat acoustic conversion device according to claim 1, wherein the first magnet and second magnet are provided on a plate-shaped member made from a magnetic material.

15 The flat acoustic conversion device according to claim 5, wherein the first magnet and second magnet are provided on a plate-shaped member made from a magnetic material.

16 The flat acoustic conversion device according to claim 7, wherein the first magnet and second magnet are provided on a plate-shaped member made from a magnetic material.

17 The flat acoustic conversion device according to claim 1, wherein the hardness of a placement portion of the vibrating membrane where the coils are placed is harder than the hardness of portions of the vibrating membrane other than the placement portion.

18 The flat acoustic conversion device according to claim 5, wherein the hardness of a placement portion of the vibrating membrane where the coils are placed is harder than the hardness of portions of the vibrating membrane other than the placement portion.

19 The flat acoustic conversion device according to claim 7, wherein the first magnet and second magnet are placed on a flexible member and the housing member is made from a flexible member.

20 A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed at a predetermined distance apart from the first magnet or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member disposed so as to face towards the first magnetic pole face and the second magnetic pole face;

a pliable air layer forming member disposed so as to form together with the vibrating member an air layer of a predetermined thickness on the first magnetic pole face and second magnetic pole face sides of the vibrating member;

a first coil which is helically wound and is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the first magnetic pole face; and

a second coil which is helically wound and is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the second magnetic pole face.

21 The flat acoustic conversion device according to claim 20, wherein current flows in the same direction in a portion of the first coil which is adjacent to the second coil and in a portion of the second coil which is adjacent to the first coil.

22 The flat acoustic conversion device according to claim 20, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are the same, either the inner peripheries of the first and second coils are connected to each other, or the outer peripheries of the first and second coils are connected to each other.

23 The flat acoustic conversion device according to claim 20, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are different from each other, either the inner periphery of one of the first and second coils is connected to the outer periphery of the other of the first and second coils, or the inner peripheries of both the first and second coils are connected to each other and the outer peripheries of both the first and second coils are connected to each other.

24 The flat acoustic conversion device according to claim 20, wherein, when the first magnet and second magnet are placed a predetermined distance apart from each other, the first coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating member which corresponds to an

outer edge of the first magnetic pole face and the second coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating member which corresponds to an outer edge of the second magnetic pole face, and wherein, when the first magnet and second magnet are placed in contact with each other, the first coil and the second coil are placed such that the inner peripheries of the coil spirals of each coil are positioned outside an area which includes a position on the vibrating member which corresponds to a center of a magnetic pole face and such that the outer peripheries of the coil spirals do not overlap each other.

25 A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed a predetermined distance apart from the first magnet or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member disposed so as to face towards the first magnetic pole face and the second magnetic pole face;

a pliable air layer forming member disposed so as to form together with the vibrating member an air layer of a predetermined thickness on the first magnetic pole face and second magnetic pole face sides of the vibrating

member;

a first coil which is helically wound and is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the first magnetic pole face;

a second coil which is formed in a helical shape wound in the opposite direction to the first coil and is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the first magnetic pole face, and such that the second coil overlaps with the first coil in an area on the vibrating member which corresponds to the first magnetic pole face, and whose inner peripheral end is connected to an inner peripheral end of the first coil;

a third coil which is formed in a helical shape wound in the same direction as the second coil, and which is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the second magnetic pole face, and whose outer peripheral end is connected to an outer peripheral end of the second coil; and

a fourth coil which is formed in a helical shape wound in the same direction as the first coil, and which is disposed such that magnetic flux interlinks in an area on the vibrating member which corresponds to the second magnetic pole face, and such that the fourth coil overlaps with the third coil in an area on the vibrating member which corresponds to the second magnetic pole face, and whose inner peripheral end is connected to an inner peripheral end of the third coil.

26 The flat acoustic conversion device according to claim 25, wherein the

first coil is provided on one surface of the vibrating member and the second coil is provided on the other surface of the vibrating member and the inner peripheral end of the second coil passes through the vibrating member and connects with the inner peripheral end of the first coil, and the third coil is provided on the other surface of the vibrating member and the fourth coil is provided on the one surface of the vibrating member and the inner peripheral end of the fourth coil passes through the vibrating member and connects with the inner peripheral end of the third coil.

27 The flat acoustic conversion device according to claim 20, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

28 The flat acoustic conversion device according to claim 25, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

29 The flat acoustic conversion device according to claim 20, wherein at least one of the first magnet and the second magnet has a plurality of types of shape.

30 The flat acoustic conversion device according to claim 25, wherein at least one of the first magnet and the second magnet has a plurality of types of shape.

31 The flat acoustic conversion device according to claim 20, wherein the first magnet and second magnet are provided on a plate-shaped member made from a magnetic material.

32 The flat acoustic conversion device according to claim 25, wherein the first magnet and second magnet are provided on a plate-shaped member made from a magnetic material.

33 The flat acoustic conversion device according to claim 31, wherein peripheral edges of the magnetic material are bent in the direction of the magnet placement surface so as to form an angle relative to the magnet placement surface.

34 The flat acoustic conversion device according to claim 32, wherein peripheral edges of the magnetic material are bent in the direction of the magnet placement surface so as to form an angle relative to the magnet placement surface.

35 The flat acoustic conversion device according to claim 20, wherein an elastic portion surrounding the placement portion is provided between the supporting portion for the support member and the placement portion

where coils are placed of the vibrating member.

36 The flat acoustic conversion device according to claim 25, wherein an elastic portion surrounding the placement portion is provided between the supporting portion for the support member and the placement portion where coils are placed of the vibrating member.

37 A flat acoustic conversion device comprising:

a vibrating body provided with a vibrating member, a helically shaped first coil disposed on the vibrating member, and a helically shaped second coil disposed on the vibrating member adjacent to the first coil;

a first magnet which is provided with a first magnetic pole face and which is mounted to the vibrating body such that the first magnetic pole face corresponds to the first coil; and

a second magnet which is provided with a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face and facing towards the same side as the first magnetic pole face and which second magnet is mounted to the vibrating body so as to be a predetermined distance apart from the first magnet or so as to be in contact with the first magnet and such that the second magnetic pole face corresponds to the second coil.

38 A flat acoustic conversion device comprising:

a vibrating body provided with a vibrating member, a helically shaped first coil disposed on the vibrating member, and a helically shaped

second coil disposed on the vibrating member adjacent to the first coil;

a holding member which is capable of holding a plurality of magnets between itself and the vibrating body and which is disposed so as to be facing the vibrating body;

a first magnet which is provided with a first magnetic pole face and which is held between the vibrating body and the holding member such that the first magnetic pole face corresponds to the first coil; and

a second magnet which is provided with a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face and facing towards the same side as the first magnetic pole face and which second magnet is held between the vibrating body and the holding member so as to be a predetermined distance apart from the first magnet or so as to be in contact with the first magnet and such that the second magnetic pole face corresponds to the second coil.

39 The flat acoustic conversion device according to claim 38, wherein the holding member is a vibrating body which is provided with a vibrating member, a first coil wound in a helical shape and placed on the vibrating member, and a second coil wound in a helical shape and placed on the vibrating member adjacent to the first coil, and wherein the first coil is placed on the vibrating member so as to correspond to a magnetic pole face opposite to the first magnetic pole face of the first magnet and the second coil is placed on the vibrating member so as to correspond to a magnetic pole face opposite to the second magnetic pole face of the second magnet.

40 The flat acoustic conversion device according to claim 37, wherein a non-magnetic pliable member is interposed between the vibrating body and the first and second magnets.

41 The flat acoustic conversion device according to claim 38, wherein a non-magnetic pliable member is interposed between the vibrating body and the first and second magnets.

42 The flat acoustic conversion device according to claim 37, wherein, in the same vibrating body, current flows in the same direction in a portion of the first coil which is adjacent to the second coil and in a portion of the second coil which is adjacent to the first coil.

43 The flat acoustic conversion device according to claim 38, wherein, in the same vibrating body, current flows in the same direction in a portion of the first coil which is adjacent to the second coil and in a portion of the second coil which is adjacent to the first coil.

44 The flat acoustic conversion device according to claim 37, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are the same, either the inner peripheries of the first and second coils are connected to each other, or the outer peripheries of the first and second coils are connected to each other.

45 The flat acoustic conversion device according to claim 38, wherein

when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are the same, either the inner peripheries of the first and second coils are connected to each other, or the outer peripheries of the first and second coils are connected to each other.

46 The flat acoustic conversion device according to claim 37, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are different from each other, either the inner periphery of one of the first and second coils is connected to the outer periphery of the other of the first and second coils, or the inner peripheries of both the first and second coils are connected to each other and the outer peripheries of both the first and second coils are connected to each other.

47 The flat acoustic conversion device according to claim 38, wherein when the coil winding directions from the outer periphery to the inner periphery of the first and second coils are different from each other, either the inner periphery of one of the first and second coils is connected to the outer periphery of the other of the first and second coils, or the inner peripheries of both the first and second coils are connected to each other and the outer peripheries of both the first and second coils are connected to each other.

48 The flat acoustic conversion device according to claim 37, wherein, when the first magnet and second magnet are placed a predetermined

distance apart from each other, the first coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating body which corresponds to an outer edge of the first magnetic pole face and the second coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating body which corresponds to an outer edge of the second magnetic pole face, and wherein, when the first magnet and second magnet are placed in contact with each other, the first coil and the second coil are placed such that the inner peripheries of the coil spirals of each coil are positioned outside an area which includes a position on the vibrating body which corresponds to a center of a magnetic pole face and such that the outer peripheries of the coil spirals do not overlap each other.

49 The flat acoustic conversion device according to claim 38, wherein, when the first magnet and second magnet are placed a predetermined distance apart from each other, the first coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating body which corresponds to an outer edge of the first magnetic pole face and the second coil is placed such that the inner periphery and the outer periphery of the coil spiral are positioned so as to sandwich a position on the vibrating body which corresponds to an outer edge of the second magnetic pole face, and wherein, when the first magnet and second magnet are placed in contact with each other, the first coil and the second coil are placed such that the inner peripheries of the coil

spirals of each coil are positioned outside an area which includes a position on the vibrating body which corresponds to a center of a magnetic pole face and such that the outer peripheries of the coil spirals do not overlap each other.

50 A flat acoustic conversion device comprising:

a vibrating body provided with:

a vibrating member;

a first coil which is helically wound and is disposed on the vibrating member;

a second coil which is formed in a helical shape wound in the opposite direction to the first coil and is disposed on the vibrating member so as to overlap with the first coil, and whose inner peripheral end is connected to an inner peripheral end of the first coil;

a third coil which is formed in a helical shape wound in the same direction as the second coil, and is disposed on the vibrating member so as to be adjacent to the second coil, and whose outer peripheral end is connected to an outer peripheral end of the second coil; and

a fourth coil which is formed in a helical shape wound in the same direction as the first coil, and is disposed on the vibrating member so as to be adjacent to the first coil and to overlap with the third coil, and whose inner peripheral end is connected to an inner peripheral end of the third coil;

a first magnet which is provided with a first magnetic pole face and is mounted to the vibrating body such that the first magnetic pole face

corresponds to the first coil and second coil; and

a second magnet which is provided with a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face and facing towards the same side as the first magnetic pole face, and which second magnet is disposed either a predetermined distance apart from the first magnet or in contact with the first magnet, and which is mounted to the vibrating body such that the second magnetic pole face corresponds to the third coil and fourth coil.

51 A flat acoustic conversion device comprising:

a vibrating body provided with:

a vibrating member;

a first coil which is helically wound and is disposed on the vibrating member;

a second coil which is formed in a helical shape wound in the opposite direction to the first coil and is disposed on the vibrating member so as to overlap with the first coil, and whose inner peripheral end is connected to an inner peripheral end of the first coil;

a third coil which is formed in a helical shape wound in the same direction as the second coil, and is disposed on the vibrating member so as to be adjacent to the second coil, and whose outer peripheral end is connected to an outer peripheral end of the second coil; and

a fourth coil which is formed in a helical shape wound in the same direction as the first coil, and is disposed on the vibrating member so as to be adjacent to the first coil and to overlap with the third coil, and

whose inner peripheral end is connected to an inner peripheral end of the third coil;

a holding member which is capable of holding a plurality of magnets between itself and the vibrating body and which is disposed so as to be facing the vibrating body;

a first magnet which is provided with a first magnetic pole face and is held between the vibrating body and the holding member such that the first magnetic pole face corresponds to the first coil and second coil; and

a second magnet which is provided with a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face and facing towards the same side as the first magnetic pole face, and which second magnet is disposed either a predetermined distance apart from the first magnet or in contact with the first magnet, and which is held between the vibrating body and the holding member such that the second magnetic pole face corresponds to the third coil and fourth coil.

52 The flat acoustic conversion device according to claim 51, wherein the holding member comprises a vibrating member, a first coil which is helically wound and is disposed on the vibrating member, a second coil which is formed in a helical shape wound in the opposite direction to the first coil and is disposed on the vibrating member so as to overlap with the first coil, and whose inner peripheral end is connected to an inner peripheral end of the first coil, a third coil which is formed in a helical shape wound in the same direction as the second coil, and is disposed on the vibrating member so as to be adjacent to the second coil, and whose outer peripheral end is

connected to an outer peripheral end of the second coil, and a fourth coil which is formed in a helical shape wound in the same direction as the first coil, and is disposed on the vibrating member so as to be adjacent to the first coil and to overlap with the third coil, and whose inner peripheral end is connected to an inner peripheral end of the third coil, and wherein said holding member is a vibrating body in which the first coil and second coil are placed so as to correspond to the magnetic pole face opposite the first magnetic pole face of the first magnet, and the third coil and fourth coil are placed so as to correspond to the magnetic pole face opposite the second magnetic pole face of the second magnet.

53 The flat acoustic conversion device according to claim 50, wherein the first coil is provided on one surface of the vibrating member and the second coil is provided on the other surface of the vibrating member and the inner peripheral end of the second coil passes through the vibrating member and connects with the inner peripheral end of the first coil, and the third coil is provided on the other surface of the vibrating member and the fourth coil is provided on the one surface of the vibrating member and the inner peripheral end of the fourth coil passes through the vibrating member and connects with the inner peripheral end of the third coil.

54 The flat acoustic conversion device according to claim 51, wherein the first coil is provided on one surface of the vibrating member and the second coil is provided on the other surface of the vibrating member and the inner peripheral end of the second coil passes through the vibrating member and

connects with the inner peripheral end of the first coil, and the third coil is provided on the other surface of the vibrating member and the fourth coil is provided on the one surface of the vibrating member and the inner peripheral end of the fourth coil passes through the vibrating member and connects with the inner peripheral end of the third coil.

55 The flat acoustic conversion device according to claim 37, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that first and second magnets alternate in a second direction which intersects the first direction.

56 The flat acoustic conversion device according to claim 38, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

57 The flat acoustic conversion device according to claim 50, wherein a plurality of rows of magnets with each row comprising alternating first and second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

58 The flat acoustic conversion device according to claim 51, wherein a plurality of rows of magnets with each row comprising alternating first and

second magnets in a first direction are positioned such that the first and second magnets alternate in a second direction which intersects the first direction.

59 The flat acoustic conversion device according to claim 20, further comprising a speaker edge which is provided with a curved portion comprising an elastic member having a portion between an outer peripheral portion and an inner peripheral portion thereof formed in a curved shape, and an outer peripheral portion of which speaker edge is fixed to a frame, and an outer peripheral portion of the vibrating member is fixed to an inner peripheral portion of the speaker edge, and in which speaker edge a high elastic modulus portion whose modulus of elasticity is lower than a compliance of surrounding portions is formed in at least one portion in the longitudinal direction of the curved portion thus reducing the amount the high elastic modulus portion is deformed by external force, wherein the vibrating member is fixed to an internal peripheral portion of the speaker edge.

60 The flat acoustic conversion device according to claim 25, further comprising a speaker edge which is provided with a curved portion comprising an elastic member having a portion between an outer peripheral portion and an inner peripheral portion thereof formed in a curved shape, and an outer peripheral portion of which speaker edge is fixed to a frame, and an outer peripheral portion of the vibrating member is fixed to an inner peripheral portion of the speaker edge, and in which speaker edge a high

elastic modulus portion whose modulus of elasticity is lower than a compliance of surrounding portions is formed in at least one portion in the longitudinal direction of the curved portion thus reducing the amount the high elastic modulus portion is displaced by external force, wherein the vibrating membrane is fixed to an internal peripheral portion of the speaker edge.

61 The flat acoustic conversion device according to claim 59, wherein the thickness of at least one portion in the longitudinal direction of the curved portion is made thicker, or a high elastic modulus portion is provided by increasing the density of an elastic body forming the one portion in the longitudinal direction of the curved portion.

62 The flat acoustic conversion device according to claim 60, wherein the thickness of at least one portion in the longitudinal direction of the curved portion is made thicker, or a high elastic modulus portion is provided by increasing the density of an elastic body forming the one portion in the longitudinal direction of the curved portion.

63 A flat acoustic conversion device comprising:

a frame provided with a base on which a plurality of magnets are arranged such that a direction faced by a predetermined polarity of one magnet is opposite a direction faced by a predetermined polarity of a magnet adjacent to the one magnet, and a peripheral wall provided on the base so as to surround the plurality of magnets;

a vibrating member facing the base and provided with a first helically wound coil and a second helically wound coil whose coil winding directions differ in accordance with a polarity of whichever of the plurality of magnets the coil is facing; and

a speaker edge provided with a curved portion comprising an elastic member having a portion between an outer peripheral portion and an inner peripheral portion thereof formed in a curved shape, and an outer peripheral portion of the speaker edge is fixed to a frame, and an outer peripheral portion of the vibrating member is fixed to an inner peripheral portion of the speaker edge, and a high elastic modulus portion whose modulus of elasticity is lower than a compliance of surrounding portions is formed in at least one portion in the longitudinal direction of the curved portion thus reducing the amount the high elastic modulus portion is deformed by external force.

64 A flat acoustic conversion apparatus comprising:

a first base on which are placed on substantially the same plane a first magnetic pole face and a second magnetic pole face each having a different polarity facing in the same direction;

a non-magnetic pliable member formed in a sheet shape; and

a second base provided with continuous conductors,

wherein the non-magnetic pliable member is interposed between the first base and the second base, and wherein the first base, the non-magnetic pliable member, and the second base are mounted together integrally such that magnetic flux substantially parallel to the plane

interlinks in the conductors.

65 The flat acoustic conversion device according to claim 64, wherein a surface of the second base which is on the opposite side to a surface facing the first base is mounted to a member comprising a non-magnetic body which is capable of vibrating and which is larger than the second base.

66 The flat acoustic conversion device according to claim 65, wherein the body which is capable of vibrating is mounted to another body which is capable of vibrating, said other body which is capable of vibrating being larger than the body which is capable of vibrating.

67 The flat acoustic conversion apparatus according to claim 64, wherein the first base is formed by locally magnetizing a plate-shaped magnetic material such that first magnetic pole faces and second magnetic pole faces alternate with each other.

68 The flat acoustic conversion apparatus according to claim 65, wherein the first base is formed by locally magnetizing a plate-shaped magnetic material such that first magnetic pole faces and second magnetic pole faces alternate with each other.

69 An acoustic conversion device comprising:

a speaker edge which is provided with a curved portion comprising an elastic member having a portion between an outer peripheral portion and

an inner peripheral portion thereof formed in a curved shape, and an outer peripheral portion of which speaker edge is fixed to a frame, and an outer peripheral portion of the vibrating member is fixed to an inner peripheral portion of the speaker edge, and in which speaker edge a high elastic modulus portion whose modulus of elasticity is lower than a compliance of surrounding portions is formed in at least one portion in the longitudinal direction of the curved portion thus reducing the amount the high elastic modulus portion is deformed by external force.

70 The acoustic conversion device according to claim 71, wherein the thickness of at least one portion in the longitudinal direction of the curved portion is made thicker, or a high elastic modulus portion is provided by increasing the density of an elastic body forming the one portion in the longitudinal direction of the curved portion.

71 A vibration actuator comprising:

a first base on which are placed on substantially the same plane a first magnetic pole face and a second magnetic pole face each having a different polarity facing in the same direction;

a non-magnetic pliable member formed in a sheet shape; and

a second base provided with continuous conductors,

wherein the non-magnetic pliable member is interposed between the first base and the second base, and wherein the first base, the non-magnetic pliable member, and the second base are mounted together integrally such that magnetic flux substantially parallel to the plane

interlinks in the conductors.

72 The vibration actuator according to claim 71, wherein a surface of the second base which is on the opposite side to a surface facing the first base is mounted to a member comprising a non-magnetic body which is capable of vibrating and which is larger than the second base.

73 The flat acoustic conversion device according to claim 72, wherein the body which is capable of vibrating is mounted to another body which is capable of vibrating, said other body which is capable of vibrating being larger than the body which is capable of vibrating.

74 The flat acoustic conversion apparatus according to claim 71, wherein the first base is formed by locally magnetizing a plate-shaped magnetic body such that first magnetic pole faces and second magnetic pole faces alternate with each other.

75 The flat acoustic conversion apparatus according to claim 72, wherein the first base is formed by locally magnetizing a plate-shaped magnetic body such that first magnetic pole faces and second magnetic pole faces alternate with each other.

76 A flat acoustic conversion device comprising:

a first magnet disposed so that a first magnetic pole face is substantially parallel to a predetermined surface;

a second magnet disposed adjacent to or in contact with the first magnet such that a second magnetic pole face having a polarity different from the polarity of the first magnetic pole face is substantially parallel to the predetermined surface and faces towards the same side as the first magnetic pole face of the first magnet;

a vibrating member provided with a conductor placement portion and having a conductor which interlinks with magnetic flux from the first and second magnets disposed on the conductor placement portion;

a housing member for housing the conductor and the vibrating member together; and

a pliable supporting member for enveloping the conductor placement portion of the vibrating member together with the conductor and thereby supporting the conductor placement portion of the vibrating member together with the conductor such that the conductor placement portion of the vibrating member is capable of vibrating together with the conductor without the conductor placement portion of the vibrating member and the conductor coming into contact with the inner surface of the housing member.